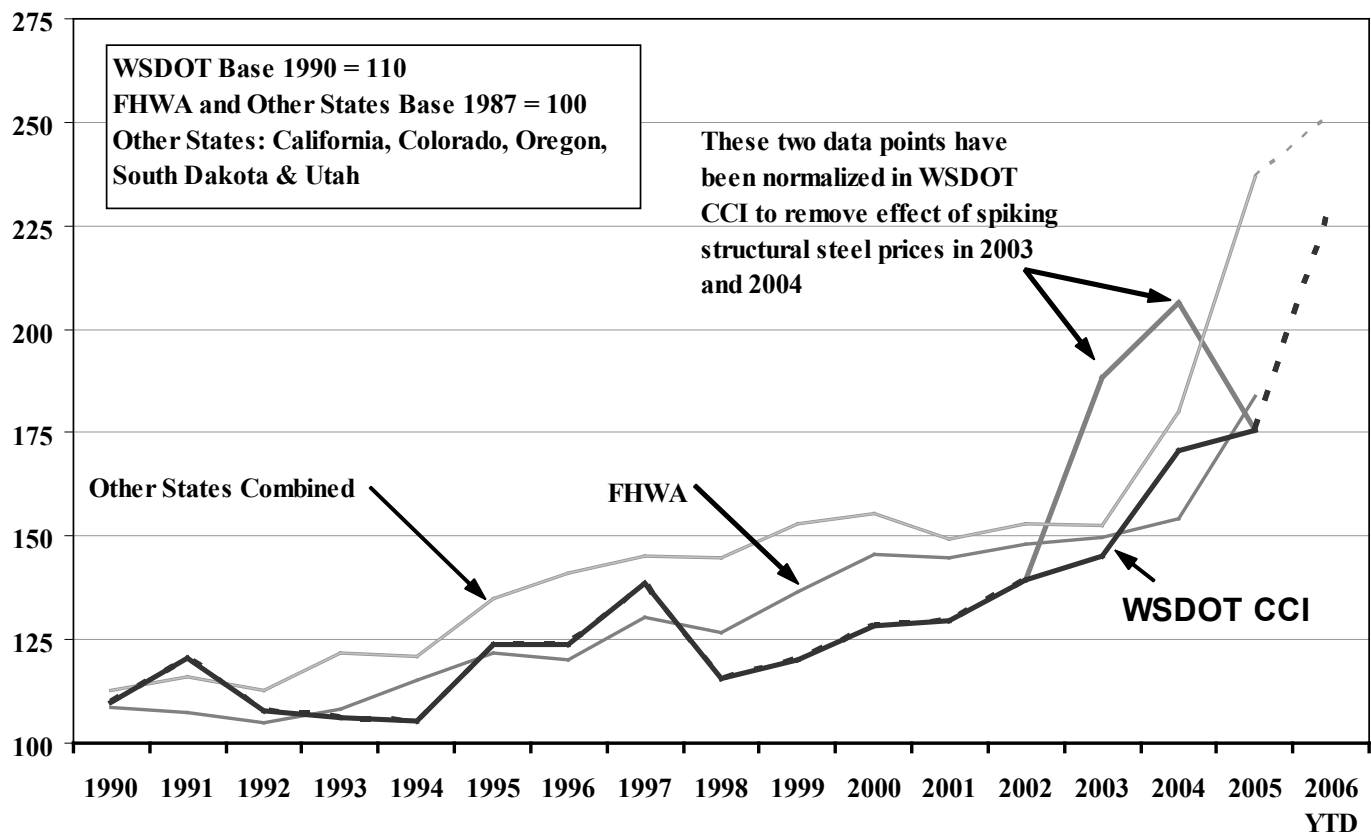


# Construction Update

Kevin J. Dayton, P.E.  
State Construction Engineer  
WSDOT Headquarters Construction Office

Executive Board Briefing  
August 8, 2006

## Construction Costs Indices Washington State and Others



The following components (weighted as shown) are used to compute the CCI:

Concrete Pavement 3.2%  
Crushed Surfacing 7.9%  
Hot Mix Asphalt 48.5%  
Roadway Excavation 10.7%  
Steel Reinforcing Bar 5.4%  
Structural Concrete 17.4%  
Structural Steel 6.9%

Note: WSDOT 2006 Index is for Quarters 1 & 2  
Other States 2006 Index based on California, Colorado and Oregon  
First Quarter Data  
FHWA Index based on 2005 Data  
Sources: WSDOT Construction Office, FHWA

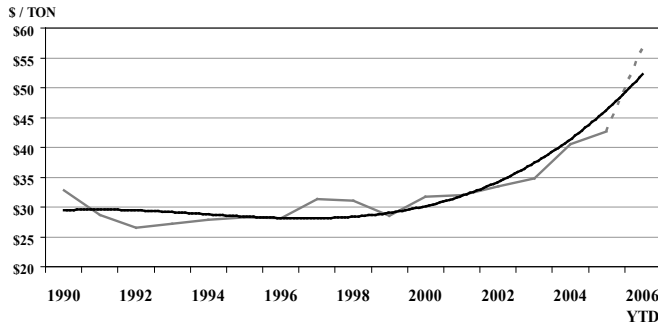
WSDOT's construction cost index (CCI) has increased 31% in the first two quarters of 2006 over the annual average for 2005, from 176 to 230. Of the seven materials WSDOT tracks in the CCI, Hot Mix Asphalt (HMA) comprises the majority, or 48.5 %, of the index. HMA costs have risen 33% in the first two quarters of 2006.

The average annual growth rate of the CCI from 1990 through 2001 was 1.5% per year, but since 2001, the average growth rate has been 12% per year. During this period the CCI has been driven up by several factors, among them: the increasing worldwide demand for construction materials; recent increases in national and international construction activity; rising crude oil prices and other energy supply issues.

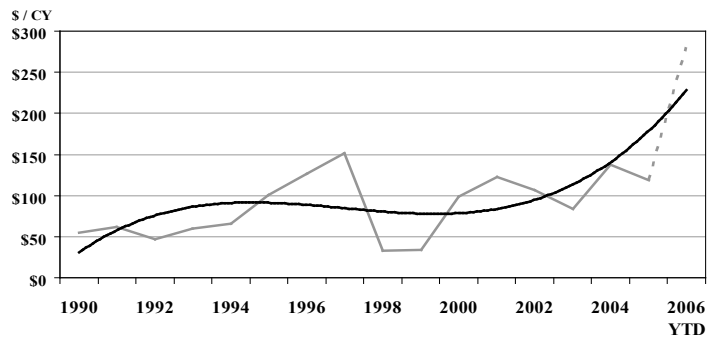
## WSDOT Highway Construction Costs Second Quarter 2006

- Roadway Excavation: \$5.45 per cubic yard
- Crushed Surfacing: \$11.14 per ton
- Hot Mix Asphalt: \$58.07 per ton
- Concrete Pavement: No concrete pavement was awarded in the second quarter. The average unit bid price for the first quarter was \$279.77 per cubic yard
- Structural Concrete: \$480.56 per cubic yard
- Steel Reinforcing Bar: \$1.23 per pound
- Structural Steel: No structural steel was awarded in the second quarter. The average price for the first quarter was \$2.67 per pound.

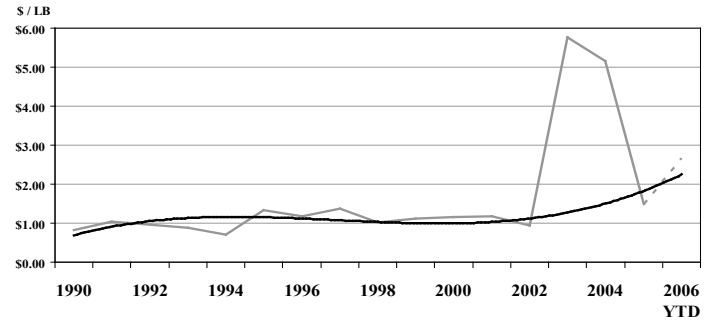
### Hot Mix Asphalt Unit Bid Price



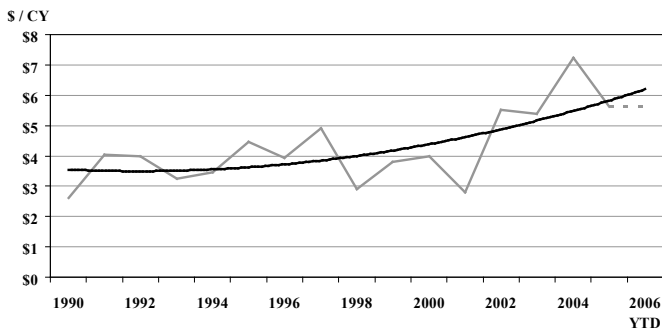
### Concrete Pavement Unit Bid Price



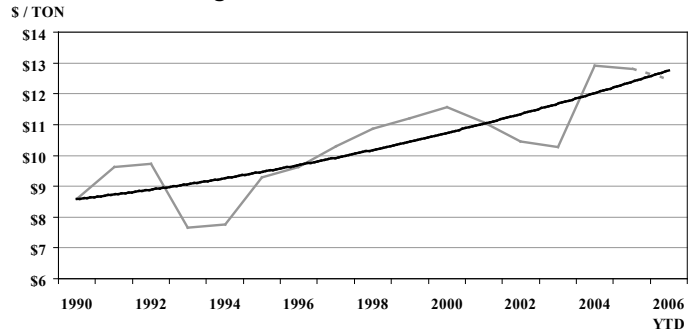
### Structural Steel Unit Bid Price



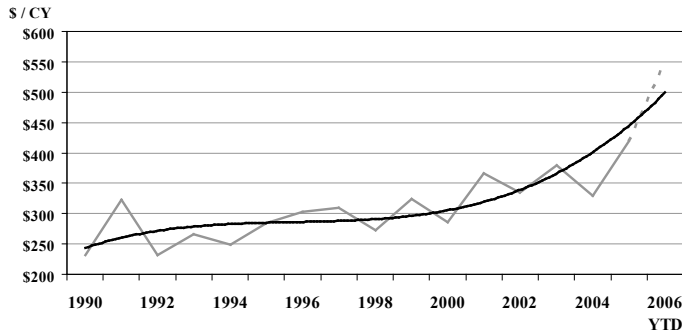
### Roadway Excavation Unit Bid Price



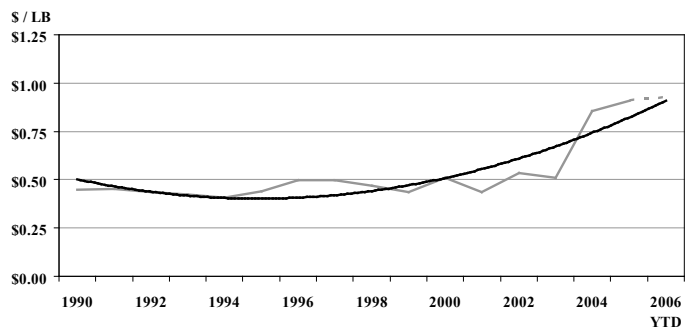
### Crushed Surfacing Unit Bid Price



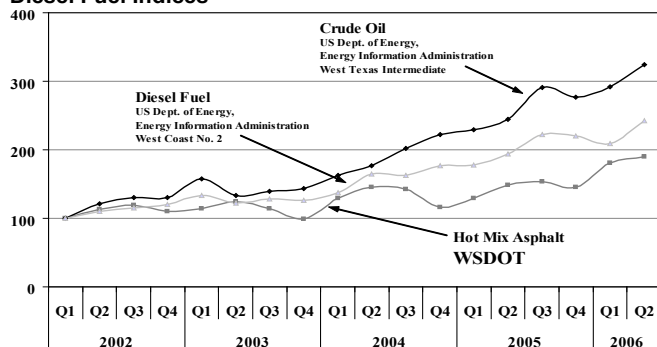
### Structural Concrete Unit Bid Price



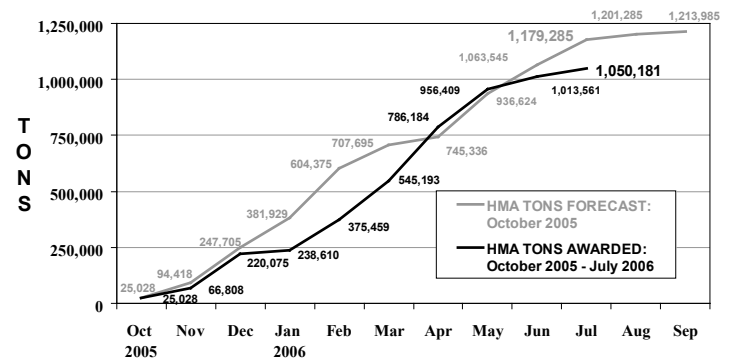
### Steel Reinforcing Bar Unit Bid Price



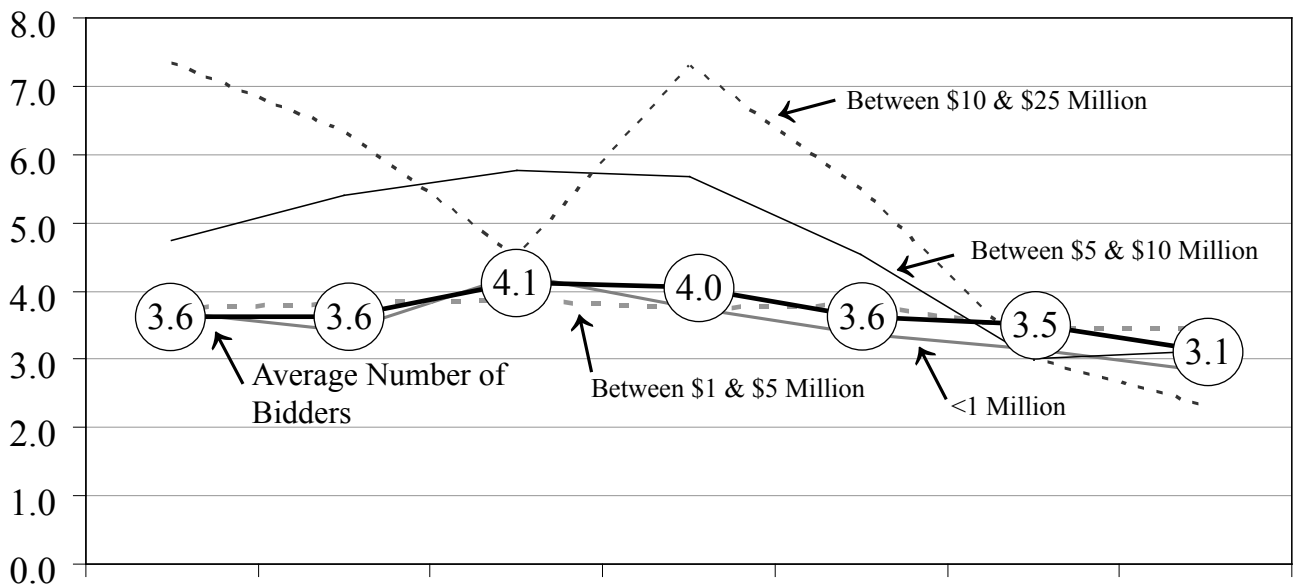
## WSDOT Hot Mix Asphalt, Crude Oil & Diesel Fuel Indices



## 2006 HMA Tons Awarded



## Average Number of Bidders By Size of Contract



	2000	2001	2002	2003	2004	2005	YTD2006
1 Bidder	8%	12%	12%	8%	13%	9%	16%
2 Bidders	26%	23%	22%	18%	20%	22%	34%
3 Bidders	24%	23%	16%	24%	23%	33%	17%
More than 3 Bidders	42%	41%	50%	50%	44%	35%	33%

### Things WSDOT Can Partially Control: The "Toolbox"

Reduced cost through increased competition

#### Communication

- Time bid advertisements to promote competitive appetite
- Communication of current and future contract opportunities; special outreach on unusual or difficult projects
- Call bidders

#### Contract structure

- Bundle or break up projects to attract bidders
- Give flexibility to contractors to encourage them to shop for the most economical materials values ("performance or end product specifications")
- Flexible start date

### Owner of choice

- Provide early payment provisions ("materials on hand")
- Cost Reduction Incentive Proposals (CRIPS)
- Fair and efficient practices in contract administration
- Fair and efficient risk allocation in the contracting relationship
- Consistency in specifications and a fair process for responding to questions and requests for clarification

### Reduced cost through reduced scope

- Bid "additive alternates"
- Adjust a project scope to "buy-less"
- Cancel a project that inflation in materials costs has made too expensive

### Prospects For Labor Costs

- Labor costs contribute roughly 40% to contractor costs
- Contractors can face a "premium charge" just to attract a qualified workforce in a booming market

- Contract negotiations could see upward pressure on wages, healthcare and retirement
- Potential labor shortages

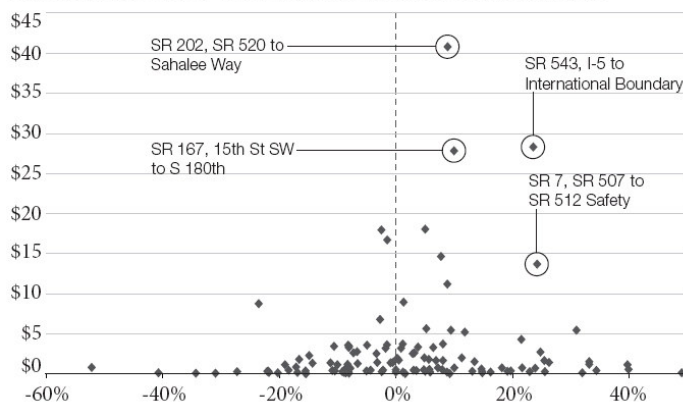
# Construction Contracts Update

## Contract Award Amount to Engineer's Estimate and Contract Final Costs to Award

WSDOT awarded 118 highway construction contracts between July 1, 2005 and June 30, 2006. During that time, WSDOT completed 114 highway construction contracts. Below, is a breakdown of the engineer's estimate compared to the award amount, and the award amount compared to the final cost for these contracts.

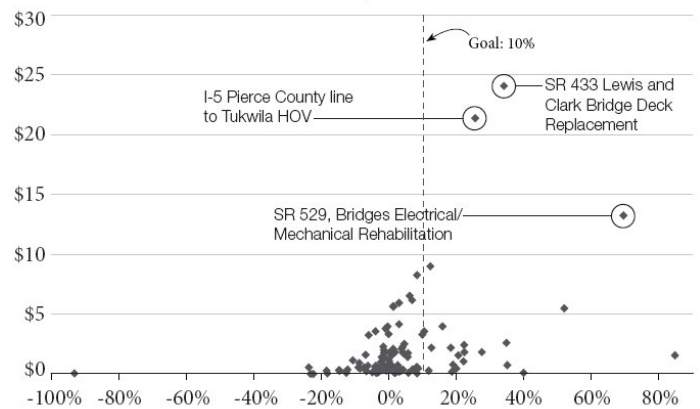
### Individual Contracts: Award Amount to Engineer's Estimate

Percent Award Above or Below Engineer's Estimate, Dollars in Millions



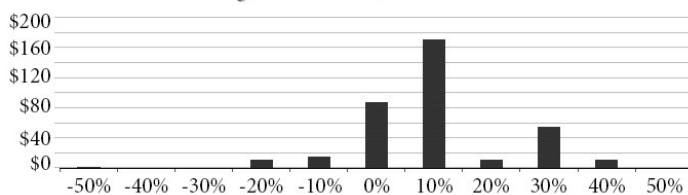
### Individual Contracts: Final Costs to Award Amount

Percent Final Cost Above or Below Award, Dollars in Millions



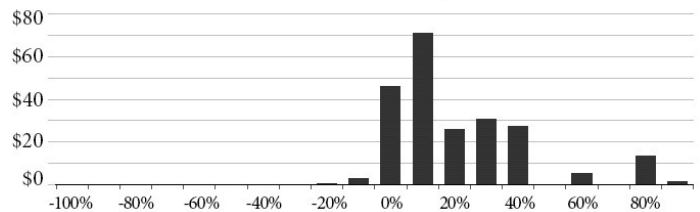
### Distribution of Contract Value Over/Under Award Amount to Engineer's Estimate

Percent Above or Below Engineer's Estimate, Dollars in Millions



### Distribution of Contract Value Over/Under Final Costs to Award Amount

Percent Final Cost Above or Below Award Amount, Dollars in Millions



### Highway Construction Contracts Awarded: Year-to-Year Comparison<sup>1</sup>

	FY2002	FY2003	FY2004	FY2005	FY2006
Number of contracts awarded	177	176	129	141	118
Total award amount for highway contracts	\$250,561,516	\$314,534,831	\$389,592,349	\$500,099,488	\$361,514,031
Total engineer's estimate for contracts	\$277,091,361	\$355,420,644	\$398,923,582	\$511,364,300	\$345,802,088
Average % awards were above/below the estimate	-7.5%	-6.5%	-1.4%	1.3%	1.9%
% total award is above/below the engineer's estimate	-9.5%	-11.5%	-2.3%	-2.2%	4.5%
Combined contract value awarded below the estimate	71.7%	84.0%	53.3%	74.4%	30.5%
Contracts awarded below the estimate	129	123	85	77	54
% of contracts awarded below the estimate	72.9%	69.9%	65.9%	54.6%	45.8%

<sup>1</sup>Does not include the Tacoma Narrows Bridge and the Hood Canal, Bridge Design Build Projects, or Emergency contracts.

### Completed Contract: Final Costs to Award Amount

	FY2002	FY2003	FY2004	FY2005	FY2006
Number of highway contracts completed	122	175	147	155	114
Total final cost for highway contracts	\$213,953,965	\$375,244,919	\$294,482,387	\$294,988,223	\$225,445,739
Total award amount for highway contracts	\$196,000,000	\$351,525,709	\$274,495,656	\$280,396,785	\$201,782,248
Average % final costs exceeded award	1.8%	3.8%	2.9%	3.9%	3.4%
% final cost exceeded award amount	9.2%	6.7%	7.3%	5.2%	11.7%
% of contract values less than 10% above award	66.0%	65.3%	45.1%	76.3%	55.1%
Number of contracts less than 10% above award	98	137	115	121	92
% of contracts less than 10% above the award	80.3%	78.3%	78.2%	78.1%	80.7%